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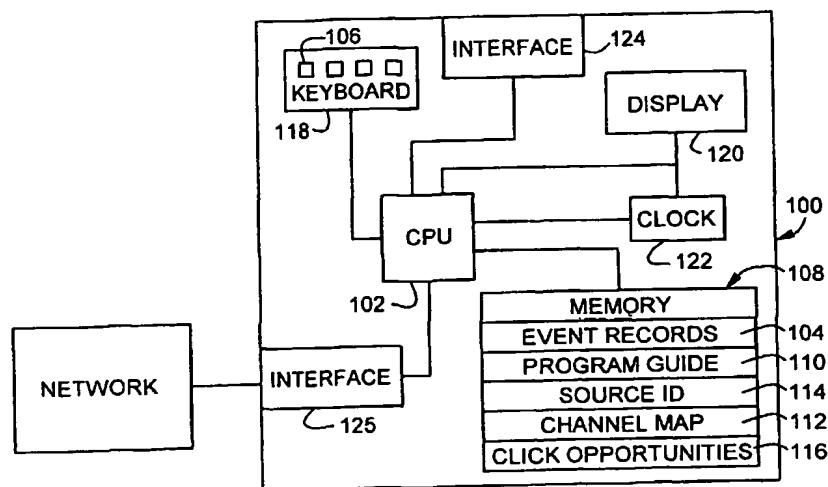
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(54) Title: **SYSTEMS AND METHODS FOR RELATING TELEVISION PROGRAMMING AND ONLINE MEDIA CONTENT BACKGROUND OF THE INVENTION**



(57) Abstract: Systems and methods for marking events, including broadcast media events, in a context sensitive manner, and systems and methods for relating the marked events to online content. A content marking device (100) has a plurality of context sensitive event marker inputs (106). In response to user selections of the context sensitive event markers, an event record (104) is developed within the content device (100) comprising (i) source ID of the marked event (114), (ii) classification of the selected context sensitive event marker, and/or (iii) time (133, 134), channel (140) and date stamp data (136) associated with the marked event. The record (104) is downloaded to a central processing system (182) and used to identify online content that is related to the marked event. Website links (194) to the online content are delivered to a website accessible to the user of the content marking device (204).

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**SYSTEMS AND METHODS FOR RELATING  
TELEVISION PROGRAMMING AND ONLINE MEDIA CONTENT  
BACKGROUND OF THE INVENTION**

**1. Field of the Invention.**

5       The present invention relates generally to marking events in a context sensitive manner, and in particular, to systems and methods for relating broadcast media content and online media content using context sensitive event markers.  
Background of the Invention.

**2. Description of the Prior Art.**

10       Recently, there has been substantial attention directed to the field of television systems and the Internet. This activity includes systems and methods for monitoring user habits, and systems and methods for relating online content and broadcast media content by providing website addresses to users. This allows content providers to better accommodate user desires and allows users to more easily obtain  
15 information related to the goods or services featured in the programming and also to similar goods or services. There is a strong need among online media content providers to attract more viewers and among viewers to more easily locate online media content of interest.

Attempts to address these needs include U.S. Patent No. 5,532,732 issued  
20 to Yuen, et al. on July 2, 1996, and U.S. Patent No. 5,907,322 issued to Kelly et al. on May 25, 1999. The Yuen patent describes an apparatus and method for using compressed codes to monitor television program viewing. The patent describes how an audience monitoring system may determine whether a television is turned on, and how the system may monitor channel selections and the times at which the selections  
25 were made. Data descriptive of the channel selections and the times of those selections is then downloaded, for example, over a telephone line to a central database.

The Kelly et al. patent describes a system for bookmarking viewer selected TV broadcast events and displaying a set of associated Internet locations or website  
30 hypertext links. More particularly, the described system stores one or more broadcast event-identifiers (date, time and channel) within an activity table and, thereafter, processes the stored event-identifier data with a database of TV

schedules, events, and company information to identify one or more Internet websites that may be of interest to a viewer. Hypertext links to the website addresses are then provided to the viewer via the system or a personal computer.

While the foregoing patents describe methodologies for monitoring user  
5 channel selection and for using event identifiers to relate broadcast media content with online media content, the described systems suffer from several disadvantages. First, the described systems use a database of TV schedules (e.g., a guide database) to correlate advertising and programming timeslots with broadcast content. Because a guide database is compiled prior to the actual distribution of the television content,  
10 the database will not reflect variations between scheduled programming and actual programming that occur on a regular basis. These variations occur for numerous reasons and may have varying effects upon the broadcast schedule for any given period. For example, the actual television programming may vary from the scheduled programming to accommodate breaking news or live events having no set time length  
15 (e.g. sporting events, concerts, etc.). Likewise, advertisers may pull out of time slots or may lose timeslots to higher bidders, and television programs distributed nationally may include advertising timeslots that are not reflected in locally or regionally distributed guides. Also, it is possible that a channel could be programmed to a different broadcast station or other source than is reflected in the guide. Thus, it can  
20 readily be seen that the described systems may lack the necessary resolution for many applications because they rely on programming guides that do not necessarily correspond to the content actually broadcast.

Further, the described systems suffer from low levels of interactivity and poor resolution of user input criteria. In order to fully appreciate and, therefore, be able to  
25 adequately accommodate the desires of the viewing public, it is important to do more than simply monitor viewing habits and/or mark programming in a context neutral manner. Although a user may simply want general information related to a show, most users have other desires that could be fulfilled. For example, an important desire of the viewing public is to be able to record selected segments of media  
30 content. These segments may include the winning touchdown in the Superbowl( or the winning hit in the World Series. Similarly, it is believed that the public would value the opportunity to purchase clips of their favorite programs, and that the fans of MTV, VH1 or CMT channel or of the various cable radio channels would value the ability

to purchase soundtracks that are provided within various programming timeslots. It is also believed that the public would appreciate the ability to receive free samples, discounts and/or to purchase directly items featured in the programming.

Additionally, it is believed that the viewing public would desire the chance to  
5 participate in promotional activities, including games, contests and surveys. Importantly, it is believed that the underlying need that the foregoing patents have failed to address includes the ability of the viewing public to mark events in a context sensitive manner so that their desires can better be accommodated, and so that better resolution of user inputs may be achieved.

#### **BRIEF DESCRIPTION OF THE SUMMARY**

10

The present invention is directed to systems and methods for relating broadcast content and online media content. This broadcast content may include, for example, events on a television or radio broadcast network, cable television or cable radio system, satellite system, or events distributed over a network such as an  
15 intranet, the Internet or the World Wide Web. The present invention includes various systems and methods for implementing a context sensitive event marking device, systems and methods for effecting context sensitive event marking within a broadcast environment and, systems and methods for relating the marked broadcast content with online media content.

20

For example, a system in accordance with one embodiment of the invention may comprise a central broadcast network, a plurality of receiving units and associated content marking devices, a central database and processing facility, and a distribution website. The programmable logic of the content marking devices may include hardware and/or software for generating and storing context sensitive event  
25 markers for identifying segments of content that are of interest to the user. In such a system, the central broadcast network may distribute media content comprising a plurality of broadcast events to the receiver units, and the context sensitive event marking devices may be used to mark particular segments of interest. In a preferred embodiment, the receiving units may include a standard television and the content  
30 marking device may include universal remote control. In such an embodiment, when the user selects a context sensitive event marker input on the remote control, the remote may cause a record to be stored within a local memory. The record may include, for example, an event identifier comprising a time and date stamp, and a

broadcast event or content source ID (also referred to as a feed ID), and, if desired, a channel ID associated with the marked event or content. The record also may preferably include a class or context identifier. Once the record is created, the data may be uploaded to a host database, where it may be resolved to identify online content corresponding to the marked event. As a result, website addresses featuring related content may be identified, retrieved, and forwarded to an area within a distribution website that is accessible by the user of the content marking device. Thereafter, the viewer may access the website and review the record data and the related website addresses.

10 Numerous context sensitive event markers may be used in connection with the present invention. Such context sensitive markers tend to raise the level of user interactivity while marking events and tend improve the resolution of user input to better identify online content that is relevant to a user's interests. The context sensitive markers of the present invention may include, for example: markers  
15 indicating a user's desire to receive additional information relating to an event; markers indicating a user's desire to receive advertising or promotional information, a sample, a coupon or some other discounted or free product or service; markers indicating a user's desire to participate in an award based promotional activity, such as a "frequent user" activity or a contest entry; markers indicating a user's opinion  
20 related to an event or the user's position with respect to an issue; and/or, markers indicating a user's desire to purchase a copy or a segment of this or a related event.

Although any name may be used for these markers, by way of example they are referred to as the Info, Shop, Win, Vote, and Clip markers, respectively. In a preferred embodiment, the marking of selected content occurs by way of a two-click  
25 method. A first user selection of one of the context sensitive event markers will cause the content marking device to retrieve and display information relevant to the user's selection. Such information explains the opportunity available and would vary depending on both the programming and the context sensitive event marker selected. Exemplary information for the Info marker may include the official website addresses  
30 for the program or network being viewed, website addresses for fan clubs, etc. Exemplary information for the Shop marker may include website addresses for goods or services related to the show, such as books, theme trips, etc. Exemplary information for the Win marker may include contests, frequent user programs or other

information that the user may interact with in real-time using the content marking device as well as website addresses of contests, frequent user programs, etc. Exemplary information for the Vote marker may include polls, questionnaires, voting opportunities and other information that the user may respond to in real-time using the content marking device as well as website addresses of polls, questionnaires, voting opportunities, etc. Exemplary information for the Clip marker may include clips, soundtracks, and entire programs being viewed that are available for purchase as well as related clips, soundtracks, programs, etc. A second user selection of the context sensitive event marker input will then log the user request, causing an indication of the selection to be stored in memory, along with other data, for later downloading to a network.

Including the source ID as part of the event record tends to increase the efficiency and accuracy of the system and method of the present invention. This method is more efficient because capturing the source ID as part of the record eliminates the step of resolving this information at the providers site. And capturing the source ID rather than, or in addition to, the channel number, insures that any inaccuracies in the channel mapping on the content marking device will not effect the accuracy of the record. Further, because the source ID and program guide for any region can be downloaded onto the remote, and because the event records are preferably resolved against a historical broadcast event database, the remote can be used anywhere and the event record will accurately reflect any regional variations in broadcast events.

Other aspects and features of the present invention will become apparent from consideration of the following description taken in conjunction with the accompanying drawings.

#### **BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS**

Fig. 1 is a schematic view of a context sensitive event marking apparatus of the present invention.

Fig. 2 is a more detailed version of the context sensitive record created in a preferred embodiment of the present invention.

Fig. 3A is a plan view of a context sensitive event marking device of the present invention in the form of a universal remote control device having a plurality of input keys.

Fig. 3B is a plan view of a context sensitive event marking device of the present in the form of computer display screen having a plurality of icons provided on the screen.

Fig. 4A shows a guide screen of the context sensitive event marking device 5 shown in figure 3A.

Fig. 4B shows a channel or broadcast event selection screen of the context sensitive event marking device shown in figure 3A.

Fig. 4C shows a click opportunity or offer screen of the context sensitive event marking device shown in figure 3A.

10 Fig. 5 is a schematic view of a system for effecting context sensitive event marking within a broadcast environment, and for relating broadcast content with online content.

Fig. 6 shows a user's clicks link page of a distribution website.

Fig. 7 is a flow chart illustrating a method of effecting context sensitive event 15 marking within a broadcast environment.

Fig. 8 is a flow chart illustrating a method of relating context sensitive marked events of broadcast content with online content.

Fig. 8A is a flow chart illustrating a method of accessing online content related to context sensitive marked events of broadcast content.

## 20 DETAILED DESCRIPTION OF THE INVENTION

As shown in Figure 1, a context sensitive event marking apparatus 100 of the present invention preferably includes a keypad 118 comprising a plurality of context sensitive event marker inputs 106, a display screen 120, a real time clock 122, a network interface 124, and a processor 102 configured to create a context sensitive 25 event record 104 in response to a selection of one of the context sensitive event marker inputs 106. The record may be stored in a memory 108 within the apparatus 100, or optionally may be stored in a memory associated with, but separate from, the apparatus (not shown). The event records 104 are stored sequentially in the memory. Other items that may be stored in the memory include a program guide 30 110, a channel map 112, a source ID 114, and click opportunities 116. The program guide 110 may include up to two weeks of scheduled programming, preferably in a tabular format. This guide may be displayed on the display screen 120 of the content marking device 100. A user would then be able to browse the guide using scroll

inputs or number inputs contained on the keypad 118 of the device. The information used to create the table is received from a national reporting service such as, for example, the Tribune Media Service(), and includes the source or feed ID for each programming event on the different channels. Tribune provides this source ID information daily on several linked flat-text files covering approximately two weeks into the future. In addition, a channel map 112 may also be stored in memory. The source ID information is helpful in accommodating the regional variations in network channel assignments and broadcast events. For example, NBC may be on channel (4) in one area but may be on another channel in a different area and may also be on a different channel for cable subscribers and non-cable subscribers in the same area. In addition, NBC may broadcast different events for different regions. The event record 104 stored in the memory 108 may contain various elements to aid in resolving the event being marked, but will preferably contain the source ID 114 for the event selected.

15       The click opportunities may include the ability to receive additional information relating to a broadcast or other event; the ability to receive advertising or promotional information, a sample, a coupon or some other discounted or free product or service related to the broadcast or other event; the ability to participate in an award based promotional activity, such as a "frequent user" activity or a contest entry; the ability to express an opinion related to an event or take a position with respect to an issue; and the ability to purchase a copy or a segment of this or a related event. In a preferred mode of operation, the click opportunities 116 may be displayed on the display screen 120 of the event marking apparatus 100 in response to a user's initial selection of one of the context sensitive event marker inputs 106 or simply displayed on the screen to announce the availability of such click opportunities. A second or confirmation selection of the event marker input 106 would then cause a record 104 to be stored in the memory 108. In creating the event record, the processor 102 will query a real time clock 138 to obtain the time associated with the marked event. Either simultaneously with creation or at a later time, the event record 104 may be uploaded to a network through a network interface 125. The interface 125 may be selected from any of the conventional interfaces known to those skilled in the art, such as a tap antennae, RF transmission, infra red transmission, cable transmission, satellite transmission, internet connection, etc. The event marking device preferably



includes a receiver unit interface 124 to communicate with a receiver unit through RF or infra red transmission.

Figure 2 shows a detailed version of a file comprising context sensitive event records as created in a preferred embodiment. As shown in Fig. 2, each file 127 has a header 126 that comprises a log format 128, an electronic serial number (ESN) 130, a head end ID (HEID) 132, and a start time 134. The log format 128 value is fixed and represents the file format for which the particular event marking device was coded to generate. Each event marking device also has a unique ESN 130, represented in ASCII decimal, which identifies the device and therefore the user. The HEID 132, also provided by a national reporting service such as the Tribune Media Service(, is a unique identification number for the cable system that provides the programming of the various broadcast networks. The start time 133 and end time 134 represents the time at which the file was created and closed, and is preferably given in Greenwich Mean Time. In a preferred embodiment, the individual records are stored in the file sequentially, with each record being appended to the file shortly after the user selects a context sensitive event marker.

An individual record of a preferred embodiment includes the following: time stamp 136, feed ID 138 (also called a source ID), click type 142, screen ID 144, and, in the case of a Vote record, a response ID 146. If desired, the record may include a channel ID 140. The time stamp 136 is the current time on the remote and is given in seconds using Greenwich Mean Time. The feed ID 138 is the broadcast source ID unique to that particular broadcast event and matches the Tribune Media Service« number used in the program guide 110 (Fig.1). The channel ID 140 is the current channel being viewed by the user. The click type 142 is a class identifier that represents the context sensitive event marker selected by the user, for example, the Info, Shop, Win, Vote or Clip markers of a preferred embodiment (described in more detail below). The screen ID 144 represents an identification of a given click opportunity and is unique for each context sensitive event marker selected during a particular segment of programming. Thus, for example, in regard to a particular television show a click opportunity associated with the Info marker might be offered to allow users to receive additional information about the show or their favorite cast members, a click opportunity associated with the Vote marker might be offered to allow users to vote for their favorite cast members, a click opportunity associated with

the Win marker might be offered to allow users to enter an online sweepstakes for a weekend in New York, another click opportunity associated with the Win marker might be offered to allow users to earn frequent viewer points for watching a particular show, a click opportunity associated with the Clip marker might be offered to allow users to purchase a copy of or segment of a particular show or related events, and a click opportunity associated with the Shop marker might be offered to allow users to receive coupons and other promotional items. If the user wanted to find out more about any or all of these click opportunities, the user could select the respective context sensitive event marker input, causing the associated information screen to be displayed. Each information screen displayed would have its own unique screen ID number 144. Continuing the example with respect to the Vote function, the information screen would allow users to enter their opinion by selecting an additional input key, resulting in a response ID number 146 being included in the record.

Figures 3A and 3B show alternate embodiments of a context sensitive event marking apparatus according to the present invention. One embodiment, as shown in Figure 3A, comprises a remote control apparatus 148. The structure and operation of a remote control device that may be modified to function in accordance with the present invention is described in detail in copending application Serial No. 09/080, 315, entitled Program Guide On A Remote Control Display which is incorporated by reference. The remote control apparatus 148 has a plurality of input keys, including the context sensitive event marker inputs 150 described above in addition to the more typical number keys 152, channel up/down keys 154, volume up/down keys 156, and scrolling keys 158 found on a standard remote. In a particularly innovative aspect, the remote control apparatus 148 may also have a display screen 160. The display screen 160 may be used for displaying information relevant to either the broadcast content, content on a computer network, or both. For example, in a preferred embodiment, the screen may be used to display the program guide and the click opportunity screens.

In an alternative embodiment, as shown in Figure 3B, the context sensitive event marking apparatus may comprise a plurality of icons 162 provided on a screen of a computing system 164. The computing system may be selected from the group including a remote control device, a personal data assistant, a personal computer,

an Internet computer, a telecommunications device, a network compatible television appliance, and/or any other device capable of receiving a signal from a context sensitive event marker input. Further, the icons may be either clickable using a standard cursor to select or they may be provided on a touch sensitive screen.

- 5 In a preferred form, the context sensitive event marker inputs may include any or all of the following: a marker 166 indicating a user's desire to receive additional information relating to an event; a marker 168 indicating a user's desire to receive advertising or promotional information, a sample, a coupon or some other discounted or free product or service; a marker 170 indicating a user's desire to participate in an  
10 award based promotional activity, such as a "frequent user" activity or a contest entry; a marker 172 indicating a user's opinion related to an event or the user's position with respect to an issue; and/or, a marker 174 indicating a user's desire to purchase a copy or a segment of the programming currently selected or of a related event. (See Figs. 3A and 3B). Optionally, these markers may be classified as, for example,  
15 Info166, Shop 168, Win 170, Vote 172, and/or Clip markers 174, respectively.

Figure 4A, 4B, and 4C show screens that appear on the event marking device as event marking is carried out on a context sensitive manner. A guide screen 171 is displayed on the context sensitive marking device. Alternatively, the guide screen 171 may also be displayed on the receiving unit (not shown). This screen may  
20 feature such data as the channel ID 173, which preferably includes the channel # and broadcast source, the time 175, and the show title 177. The user may then select content of interest from the guide screen 171, causing a channel screen 179 to be displayed. The channel screen features more detailed information about the particular content of interest to the user, including whether additional information is  
25 available if the user selects one of the context sensitive event markers. If the user then selects one of the context sensitive event markers, the respective offer screen 181 for that marker will be displayed. The offer screen will provide information to the user such as descriptions of online locations featuring content related to the show. In alternate embodiments, the information provided may be either default information,  
30 customized information, or both. Using default information is advantageous because it creates numerous opportunities for a user to obtain additional information without requiring a large amount of resources. Customized information, on the other hand, requires more resources but can provide a user with better quality information that

is tailored to the content and/or the user.

Selection of any of the Info, Shop, Win, Vote, or Clip marker inputs will cause to be displayed predetermined information related to both the particular broadcast content and the particular marker selected. Thus, for example, selecting the Info  
5 marker causes the processor to retrieve from memory and display predetermined data associated with the Info marker for that particular broadcast content. Continuing with the Info marker example, default information may include such things as the official website for the show and/or for the network. Customized information may include online locations that feature goods or services related to the show or they  
10 may have additional information about the show or about topics covered by the show. With respect to the Shop marker, the information provided on the offer screen may include, for example, discounts, coupons, rebates or other methods of offering discounted or free products that are available at specific locations on the network. Information displayed in response to selection of the Win marker may include  
15 one-time promotions such as contests as well as ongoing "frequent user" type promotions. Information associated with selection of the Vote marker may include online polling locations and other sites where a user might have the opportunity to express an opinion or take a position with respect to a topic related to the broadcast content. Likewise, information associated with selection of the Clip marker may  
20 include online locations where audio or video clips may be purchased. These clips may be of the actual content broadcast or of related content. The user accepts the offer by selecting the context sensitive event marker a second time, which causes a confirmation screen 183 to be displayed.

As shown in Figure 5, a preferred embodiment of the present invention  
25 comprises a system for effecting context sensitive event marking within a broadcast environment. The system includes a broadcast network 176, a plurality of receiver units 178, a content marking device 100, a content network 180, a central database and processing server network 182 in communication with the content network 182, a plurality of network content locations 184, and a distribution website 186 in  
30 communication with or configured within the server network 182. The broadcast network 176 distributes content to the plurality of receiver units 178. The broadcast content may include, for example, events on a television or radio broadcast network, cable television or cable radio system, satellite system, or events distributed over a

network such as an intranet, the Internet or the World Wide Web. Content marking devices 100, as described above, are associated with each of the receiver units 178.

Although in a preferred embodiment the receiving units 178 are separate and distinct from the content marking devices 100, it is understood that both elements could be aspects of a single device. As described above, the content marking device enables a user to mark content of interest in a contextually sensitive manner and to have this mark stored for later uploaded to a network such as the server network 182. The processor 102 is configured to create and have stored in a memory 108 the marks or event records 104 created in response to a selection of one of the context sensitive event marker inputs 106.

The system preferably relates the marked broadcast content to online content, which exists on a content network 180. The content network 180, which comprises a plurality of network content locations 184, may be an intranet, the Internet or the World Wide Web. The server network 182 either includes or is in communication with a distribution website 186. The server network 182 further includes an event record storage area or database 192. Once the event records 104 have been uploaded and stored on the server network 182, the event records 104 are preferably erased from the memory in the content marking device 100. The event records stored in the storage area 192 are also preferably erased, to conserve space on the server network, once the event record is resolved with the event database 188 and click opportunity database 190 to form a click links record as discussed below.

The server network 182 also preferably includes a central processing unit (CPU) 200, an interface 196 to communicate with the content network 180, a broadcast event database 188, a click opportunity database 192, and a click links database 194. Each of the databases, the event record storage area, and the network interface are functionally coupled to the CPU 200. The CPU 200 may be a single unit or optionally be distributed over a plurality of server devices.

The broadcast event database 188 comprises both historical and future broadcast event listings received from a national reporting service such as the Tribune Media Service(. Because of the voluminous amount of information associated with what has been broadcast and what is to be broadcast on all the different stations in all the different regions and for all the different carriers or providers of broadcast content, the event database is preferably continuously

overwritten to maintain a future and historic log of broadcast events for a discreet period of time. Preferably, the log will include ten (10) to fourteen (14) days of future or to be broadcast events and about twenty (20) to sixty (60) days of past broadcast events. The log of future broadcast events is preferably used to compile a program  
5 guide as discussed above and, also, to generate the click opportunity database 190.

The click opportunity database 190 compiles the click opportunities available for each broadcast event such as a link to more information about a particular show, a link to coupons for a advertised product, a link to discussion groups on a particular subject, a link to related video clips, etc. The click links database 194 stores an  
10 individual users click link records which are compiled by resolving the user's event records with the broadcast event database 188 and the click opportunity database 190. Preferably, the number of click link records stored in the click link database 194 for an individual user is limited to a discreet number to conserve space on the server network. Once this number is reached, the click link records are overwritten in a first  
15 in time to last in time order.

As event records are uploaded to the storage area 192, the records are resolved, in a manner understood by those skilled in the art, with the event database 188 to retrieve broadcast event listings associated with the event record. The broadcast event listing and the contextually sensitive marking information provided  
20 in the event record is then resolved with the click opportunity database 190 to create a click link record that is stored in the click links database 194. The click link records are preferably stored in a file associated with the ESN provided in the event record. As a result of this process, the event records are associated with network content locations 184 having content relevant to the broadcast content represented by the  
25 event records.

Figure 6 shows a detailed version of a display page 202 for an individual user on the distribution website 186. In a preferred embodiment, the display page 202 comprises a click links table 204 compiled from a user's click links records which were created by resolving the uploaded event records with the event and click  
30 opportunity databases 188 and 190. The click links table 204 provides individual user with a visual display that clearly lays out in an easy to use format a user's contextual marked broadcast events and associated click opportunities or online content. Preferably, the table 204 comprises a class column 208, a request column 210, a title

column 212, and a results column 214. The class 208 column displays the classification of the context sensitive event marker input selected by the user, which in a preferred embodiment includes the Info, Shop, Win, Vote and Clip. The request column 210 displays the marked programming and may include any or all of the following: the time, the date, the channel, and the logo or other identifier for the channel or broadcast source. The results column 214 displays the associated network locations 184 having content of interest to the user. Preferably, these locations are provided as hypertext links, but they may also be provided as text addresses.

10 As shown in Figure 7, a preferred method of carrying out the invention includes marking events using context sensitive event markers. In this method, a user is provided with a content marking device having a plurality of context sensitive event marker inputs. Content that may potentially be marked by the user is broadcast to a plurality of receiver units, (step 216), at least one of which is associated with the  
15 content marking device. Indication of click opportunities (step 218) related to the broadcast event may be provided to the user. In addition to marking a broadcast event based on an interest in the content being broadcast, indications of other marking opportunities can also be provided to the user (step 218). These indications or announcement of such marking opportunities may be provided to the user on a  
20 display screen of the receiving unit, a display screen on the content marking device, on a separate but associated display, or by audible or other means. The user may use the context sensitive markers to contextually mark events of interest. The user selection, and thus mark, is detected and the context of the selected event marker input is determined (step 220). In response, a predetermined description of the  
25 marking opportunity is displayed to the user (step 222a, b, c, d, or e). If the user desires to take advantage of the opportunity, he may select the context sensitive marker a second time (step 224a, b, c, d, or e), causing an event record to be stored in memory (step 226). The record includes an event content identifier, corresponding to the marked event, and a class identifier, corresponding to a selected one of the  
30 context sensitive event marker inputs. The content marking device may then be docked (step 228) to establish a communication link (step 230) with the server network 182 to upload one or more event records (step 230) to the server network 182.

As further shown in Figure 7, the above process preferably includes an extra step when the Vote marker is selected (step 220) by the user. As with other selections, a description of the Vote marking opportunity is displayed to the user (step 222d). If the user desires to take advantage of the Vote marking opportunity, he may select the Vote marker a second time (step 224d). Prior to storing an event record in memory (step 226), the user is prompted to log a response (step 225). The response is appended to the event record, which is then stored in memory (step 226).

Figures 8 and 8a, show a preferred method of carrying out the present invention by associating the broadcast events or click opportunities contextually marked by the user with content provided on an information network, and then displaying the information in manner that the user can easily use to access the network content. The broadcast event database 188 is created by downloading historical and future broadcast event listings or log (step 238) from a national reporting service such as the Tribune Media Service( and storing the same (step 240) in the event database 188. The click opportunity database is created (step 236) by compiling click opportunities that relate broadcast events such as a link to more information about a particular television show, a link to coupons for a advertised product, a link to discussion groups on a particular subject, a link to related video clips, etc.

When the event recorded is uploaded (step 232) to the server network 182, it is initially stored (step 234) in an event record storage area 192. The event record is then resolved with the historical event log (step 242) in the event database 188 to retrieve a corresponding event listing. Next, the event record with its contextual marking information and the event listing are resolved with the click opportunity database (step 244) to create a click link record that associates the marked broadcast event with content on a network. Next, the click link record is stored (step 246) in the click links database 194.

As shown in Figure 8A, the user is able to access the network content associated with the marked broadcast event by logging on to a distribution website (step 248). Once logged on to the website, a user's click link records are retrieved (step 250) from the click links database 194 and placed in tabular form (step 252) into a click links table 204 shown in Figure 6. The user next accesses (step 254) the content locations 184 on the network associated with the marked broadcast events



by clicking on the hypertext link provided in the results column 214 or by copying the textually provided location address into the address line of the user's network browser.

While the invention is susceptible to various modifications and alternative forms, a specific example thereof has been shown in the drawings and is herein described in detail. It should be understood, however, that the invention is not to be limited to the particular form disclosed, but to the contrary, the invention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the appended claims.

**A CLAIM OR CLAIMS**

We claim:

1. A context sensitive event marking apparatus comprising:  
a plurality of context sensitive event marker inputs, and  
5 a processor coupled with said inputs and configured to create and have stored  
in memory a context sensitive event record in response to a selection of one of said  
context sensitive event marker inputs, said context sensitive event record comprising  
an event identifier corresponding to a marked event and a class identifier  
corresponding to a selected one of said context sensitive event marker inputs.
- 10 2. The context sensitive event marking apparatus of claim 1 wherein said  
context sensitive event marking apparatus comprises a remote control unit and  
wherein said plurality of context sensitive event marker inputs comprise a plurality of  
input keys on said remote control apparatus.
3. The context sensitive event marking apparatus of claim 1 further  
15 comprising a computing system having a screen wherein said plurality of context  
sensitive event marker inputs comprise a plurality of icons provided on said screen.
4. The context sensitive event marking apparatus of claim 3, wherein said  
computing system is selected from a group including remote control devices,  
personal data assistants, personal computers, Internet computers,  
20 telecommunications devices and network compatible television appliances.
5. The context sensitive event marking apparatus of claim 1, wherein said  
event identifier includes a source ID code associated with a marked event.
6. The context sensitive event marking apparatus of claim 1, wherein said  
event identifier includes a time and date stamp associated with a marked event.
- 25 7. The context sensitive event marking apparatus of claim 1, wherein said  
event identifier includes a channel ID code associated with a marked event.
8. The context sensitive event marking apparatus of claim 1, wherein said  
plurality of context sensitive event marker inputs includes a marker indicating a user's  
desire to receive additional information relating to a marked event.
- 30 9. The context sensitive event marking apparatus of claim 1, wherein said  
plurality of context sensitive event marker inputs includes a marker indicating a user's  
desire to participate in a promotional activity.
10. The context sensitive event marking apparatus of claim 1, wherein said

plurality of context sensitive event marker inputs includes a marker indicating a user's desire to purchase an item related to a marked event.

11. The context sensitive event marking apparatus of claim 1, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's  
5 opinion related to a marked event.

12. A system for effecting context sensitive event marking within a broadcast environment, said system comprising:

a broadcast network for distributing broadcast content to a plurality of receiver units; and

10 a content marking device associated with one of said receiver units, said content marking device comprising a plurality of context sensitive event marker inputs,

a memory, and

a processor coupled with said inputs and configured to create and have stored  
15 within said memory a context sensitive event record in response to a selection of one of said context sensitive event marker inputs, said context sensitive event record comprising an event identifier corresponding to a marked event and a class identifier corresponding to a selected one of said context sensitive event marker inputs.

13. The system for effecting context sensitive event marking within a  
20 broadcast environment of claim 12, wherein said content marking device comprises a remote control apparatus having a plurality of input keys.

14. The system for effecting context sensitive event marking within a broadcast environment of claim 12, wherein said content marking device comprises a computing system having a screen and a plurality of icons provided on said screen.

25 15. The system for effecting context sensitive event marking within a broadcast environment of claim 14, wherein said computing system is selected from a group including remote control devices, personal data assistants, personal computers, Internet computers, telecommunications devices and network compatible television appliances.

30 16. The system for effecting context sensitive event marking within a broadcast environment of claim 12, wherein said event identifier comprises a source ID code associated with said broadcast content.

17. The system for effecting context sensitive event marking within a

broadcast environment of claim 12, wherein said event identifier comprises a time, date, and channel stamp associated with said broadcast content.

18. The system for effecting context sensitive event marking within a broadcast environment of claim 12, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to receive additional information relating to said broadcast content.

19. The system for effecting context sensitive event marking within a broadcast environment of claim 12, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to participate in a promotional activity.

20. The system for effecting context sensitive event marking within a broadcast environment of claim 12, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to purchase an item related to said broadcast content.

21. The system for effecting context sensitive event marking within a broadcast environment of claim 12, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's opinion related to said broadcast content.

22. A system for utilizing context sensitive event markings within an online environment, said system comprising:

a first database, said first database comprising a plurality of online content locations;

a second database, said second database comprising a context sensitive event record storage area; and

a central processing unit configured to resolve said first and said second databases and retrieve online network locations having content relevant to broadcast content represented by context sensitive event records stored in said context sensitive event record storage area, and said central processing unit configured to display said online network locations having relevant content at a predetermined location on said online network.

23. The system for utilizing context sensitive event markings within an online environment of claim 22, wherein said event identifier comprises a source ID code associated with said broadcast content.

24. The system for utilizing context sensitive event markings within an online environment of claim 22, wherein said event identifier comprises a time, date and channel stamp associated with said broadcast content.

25. A system for effecting and utilizing context sensitive event markings  
5 within an online environment, said system comprising:

a first database, said first database comprising a plurality of online content locations;

a second database, said second database comprising a context sensitive event record storage area;

10 a content marking device, said content marking device comprising a plurality of context sensitive event marker inputs;

a processor, said processor configured to create and have stored within a memory a context sensitive event record in response to a selection of one of said context sensitive event marker inputs, said context sensitive event record comprising  
15 an event identifier corresponding to a marked event and a class identifier corresponding to a selected one of said context sensitive event marker inputs, and said processor configured to download one or more of said records to said context sensitive event record storage area of said second database; and

a central processing unit configured to resolve said first and said second  
20 databases and retrieve network locations having media content relevant to broadcast content represented by said context sensitive event records stored in said context sensitive event record storage area, and said central processing unit configured to display said second network locations having relevant media content at a predetermined location on said second network.

25 26. The system for and utilizing context sensitive event marking within a broadcast environment of claim 25, wherein said content marking device comprises a remote control apparatus having a plurality of input keys.

27. The system for effecting and utilizing context sensitive event markings within an online environment of claim 25, wherein said content marking device  
30 comprises a computing system having a screen and a plurality of icons provided on said screen.

28. The system for effecting and utilizing context sensitive event markings within an online environment of claim 27, wherein said computing system is selected

from a group including remote control devices, personal data assistants, personal computers, Internet computers, telecommunications devices and network compatible television appliances.

29. The system for effecting and utilizing context sensitive event markings  
5 within an online environment of claim 25, wherein said event identifier comprises a source ID code associated with said broadcast content.

30. The system for effecting and utilizing context sensitive event markings  
within an online environment of claim 25, wherein said event identifier comprises a time, date, and channel stamp associated with said broadcast content.

10 31. The system for effecting and utilizing context sensitive event markings  
within an online environment of claim 25, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to receive additional information relating to said broadcast content.

32. The system for effecting and utilizing context sensitive event markings  
15 within an online environment of claim 25, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to participate in a promotional activity.

33. The system for effecting and utilizing context sensitive event markings  
within an online environment of claim 25, wherein said plurality of context sensitive  
20 event marker inputs includes a marker indicating a user's desire to purchase an item related to said broadcast content.

34. The system for effecting and utilizing context sensitive event markings  
within an online environment of claim 25, wherein said plurality of context sensitive  
event marker inputs includes a marker indicating a user's opinion related to said  
25 broadcast content.

35. A system for relating broadcast content and online content, said system  
comprising:

a broadcast network for distributing broadcast content to a plurality of receiver  
units;

30 a first database, said first database comprising a plurality of online content  
locations;

a second database, said second database comprising a context sensitive  
event record storage area;

a content marking device associated with one of said receiver units, said content marking device comprising a plurality of context sensitive event marker inputs,

a processor, said processor configured to create and have stored within a memory a context sensitive event record in response to a selection of one of said context sensitive event marker inputs, said context sensitive event record comprising an event identifier corresponding to a marked event and a class identifier corresponding to a selected one of said context sensitive event marker inputs, and said processor configured to download one or more of said records to said context sensitive event record storage area of said second database; and

a central processing unit configured to resolve said first and said second databases and retrieve network locations having online content relevant to broadcast content represented by said context sensitive event records stored in said context sensitive event record storage area, and said central processing unit configured to display said locations having relevant online content at a predetermined location on said second network.

36. The system for relating broadcast content and online media content of claim 35, wherein said content marking device comprises a remote control apparatus having a plurality of input keys.

37. The system for relating broadcast content and online media content of claim 35, wherein said content marking device comprises a computing system having a screen and a plurality of icons provided on said screen.

38. The system for relating broadcast content and online media content of claim 37, wherein said computing system is selected from a group including remote control devices, personal data assistants, personal computers, Internet computers, telecommunication devices and network compatible television appliances.

39. The system for relating broadcast content and online media content of claim 35, wherein said event identifier comprises a source ID code associated with said broadcast content.

40. The system for relating broadcast content and online media content of claim 35, wherein said event identifier comprises a time, date, and channel stamp associated with said broadcast content.

41. The system for relating broadcast content and online media content of

claim 35, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to receive additional information related to said broadcast content.

42. The system for relating broadcast content and online media content of  
5 claim 35, wherein said plurality of context sensitive event marker inputs includes a marker indicating a user's desire to participate in a promotional activity.

43. The system for relating broadcast content and online media content of  
claim 35, wherein said plurality of context sensitive event marker inputs includes a  
marker indicating a user's desire to purchase an item related to said broadcast  
10 content.

44. The system for relating broadcast content and online media content of  
claim 35, wherein said plurality of context sensitive event marker inputs includes a  
marker indicating a user's opinion related to said broadcast content.

45. A method for marking events using context sensitive event markers,  
15 said method comprising:

providing a user with a content marking device having a plurality of context  
sensitive event marker inputs;

detecting a user selection of one of said context sensitive event marker inputs;

creating a record of said user selection, said record comprising an event  
20 identifier corresponding to a marked event and a class identifier corresponding to a  
selected one of said context sensitive event marker inputs; and

storing said record in a memory.

46. The method of claim 45, wherein said event identifier further comprises  
an event source ID code associated with said event content.

25 47. The method of claim 45, wherein said event identifier further comprises  
a time, date, and channel stamp data associated with said event content.

48. The method of claim 45, further comprising the steps of:

transmitting said record to an online database;

resolving said record with a compilation of addresses for online content; and

30 selecting one or more of said addresses for display, said one or more  
addresses being selected based on having online content relevant to said marked  
event represented by said record.



49. A method of relating marked events to online content, said method comprising the steps of:

storing a list of potentially marked events in a first database;

receiving a marked event record, said event record comprising an event  
5 identifier and a class identifier;

resolving said event record with said list of potentially marked events, whereby  
an event represented by said event record may be identified; and

generating at least one address for online content, wherein said address is  
selected based on having content related to both the marked event and the context  
10 sensitive indicator.

50. The method of claim 49, wherein said event identifier further comprises  
an event source ID code associated with said event.

51. The method of claim 49, wherein said event identifier further comprises  
a time, date, and channel stamp data associated with said event.

15 52. A system for relating broadcast media content and online media  
content, said system comprising:

a broadcast source for distributing media content to a plurality of receiver units;  
means for indicating user response to said distributed media content in a context  
sensitive manner and for delivery of a record of said context sensitive indicators of

20 user response to a content distribution website; and

means for providing website addresses of online media content at said content  
distribution website, said online media content being contextually significant to said  
distributed media content indicated in said record.

FIG. 1

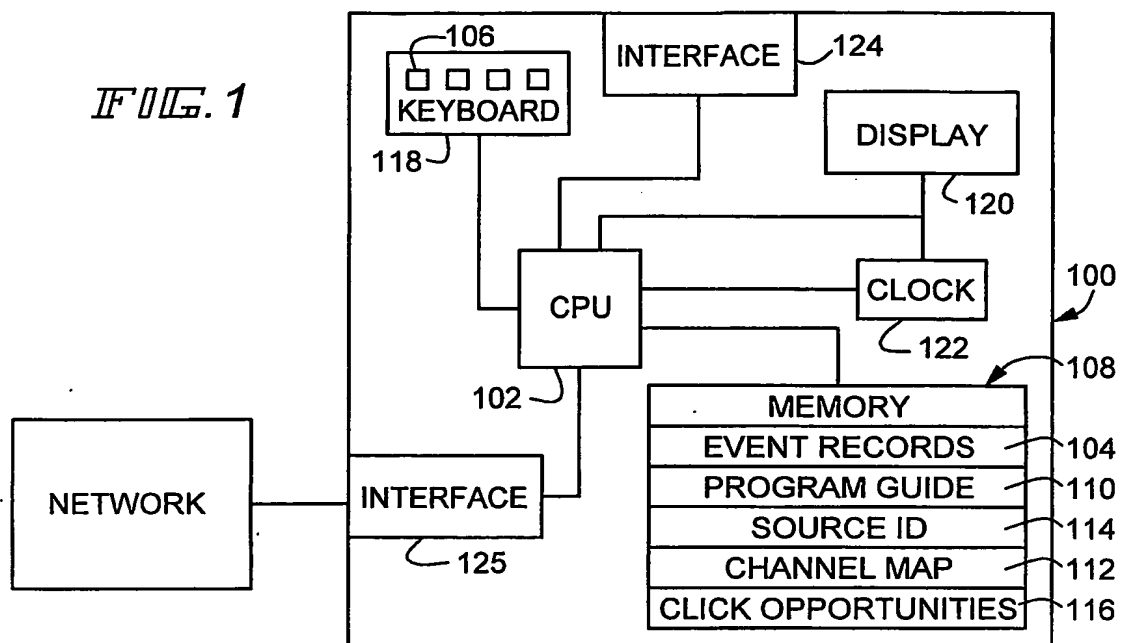


FIG. 2

127

126

HEADER INFORMATION					
	LOG FORMAT				128
	ELECTRONIC SERIAL NUMBER				130
	HEAD END ID				132
	START TIME		END TIME		134
LOG FILE 136 138 133 140 142 144 146					
TIME STAMP	FEED ID	CHANNEL ID	CLICK TYPE	SCREEN	RESPONSE
23456780	10538	2	1	62	
23457120	15029	4	4	35	3

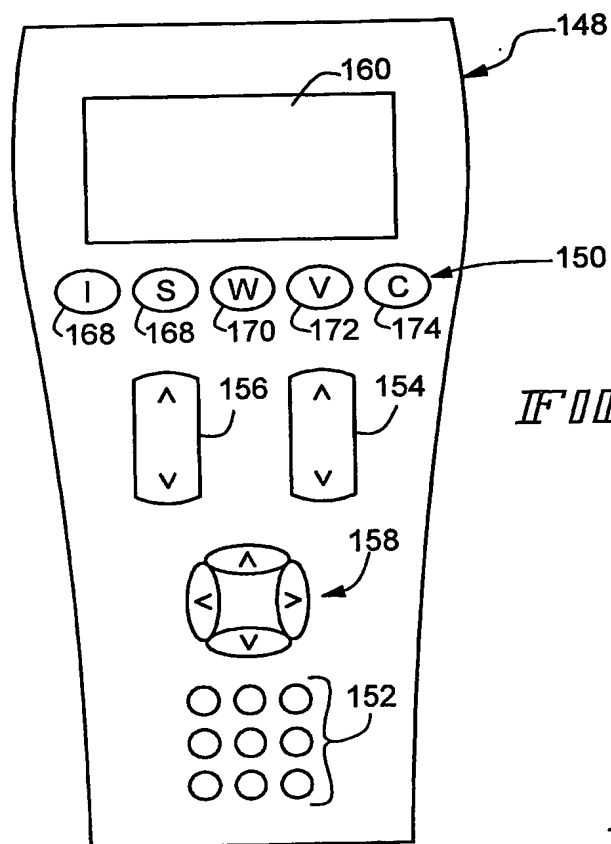
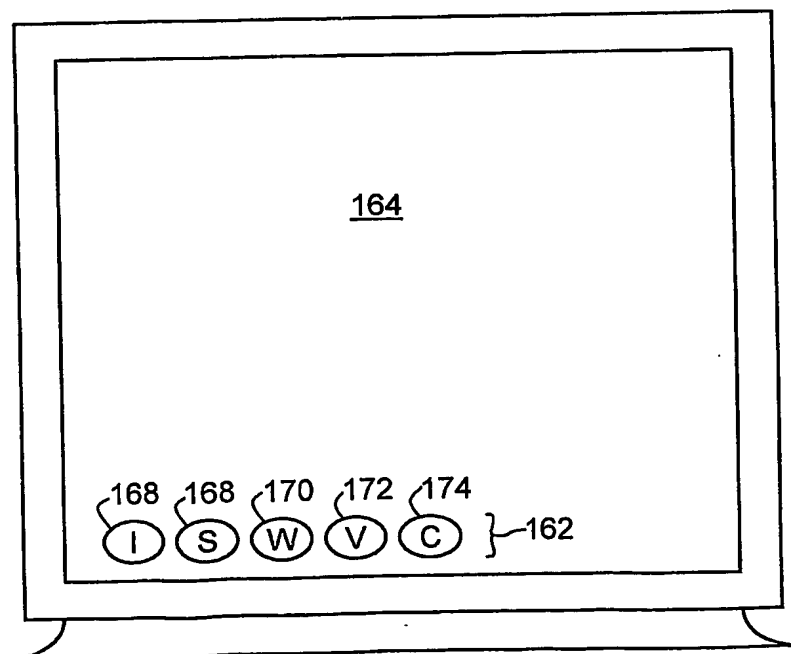
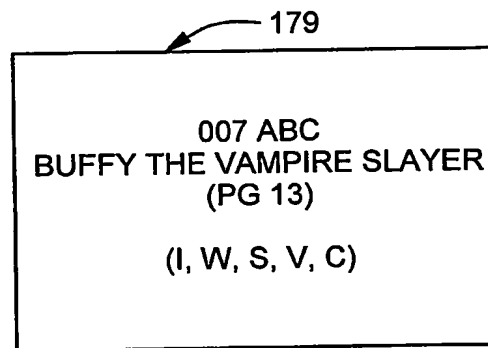
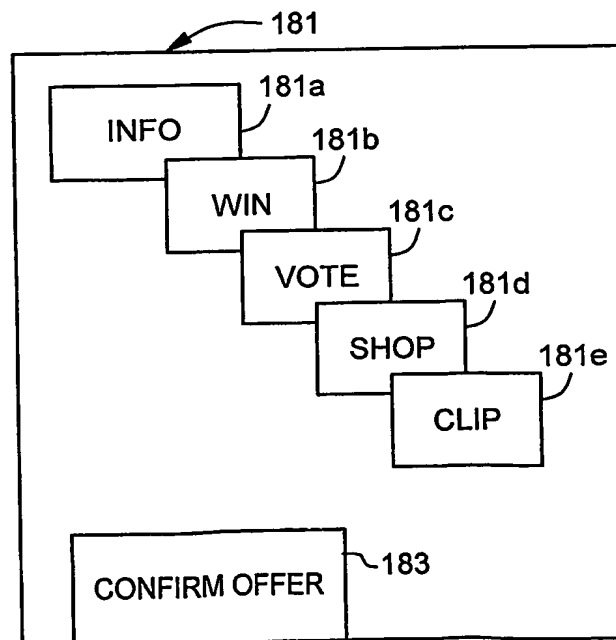
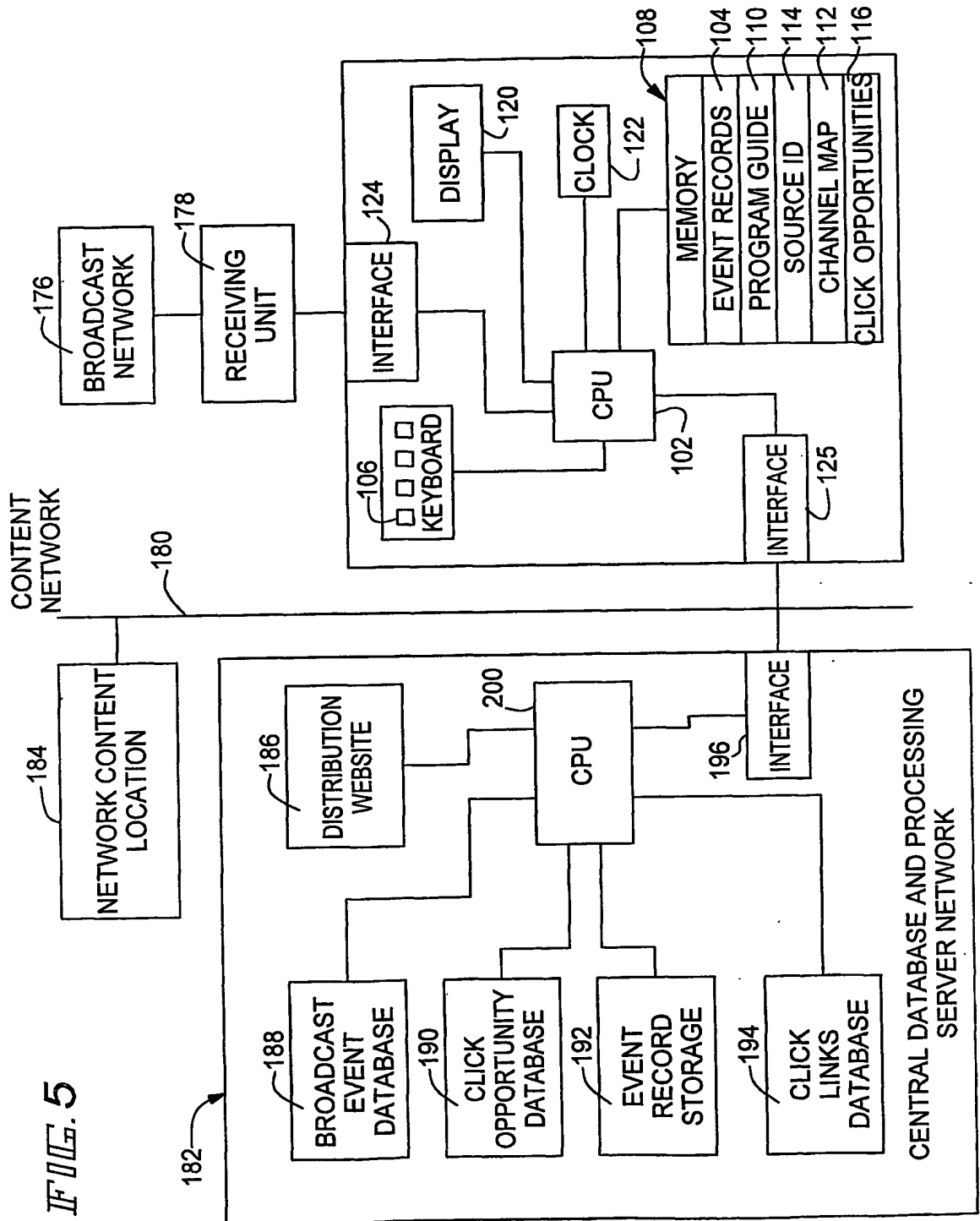


FIG. 3B








CHANNEL	8:00 PM
004 NBC	FRIENDS
007 ABC	BUFFY

*FIG. 4A**FIG. 4B**FIG. 4C*



202

WELCOME TO YOUR "CLICK LINKS"

	REQUEST	TITLE	RESULTS
MOHS SHOW	 29 D S C 01:13 PM 12/20/99	SHARK ATTACK	<a href="#">SHARK BOOKS FROM AMAZON.COM</a> <a href="#">OFFICIAL DISCOVERY.COM SHARK SITE</a>
MOHS SHOW	 5 WB 01:13 PM 12/20/99	BUFFY THE VAMPIRE SLAYER	<a href="#">VAMPIRE BOOKS FROM AMAZON.COM</a> <a href="#">OFFICIAL BUFFY SITE AT WB.COM</a> <a href="#">TRIPS TO PENNSYLVANIA BY YAHOO</a>
WIN	 7 ABC 01:18 PM 12/20/99	DHARMA & GREG	<a href="#">CAN YOU GUESS HOW OLD DHARMA IS?</a>
VOTE	 1 ONE 01:27 PM 12/20/99	SMART GUY	<a href="#">JOIN IN ON THE FUN AND PICK YOUR FAVORITE ACTOR.</a>
	 0 ESPN 01:20 PM 12/20/99	ESPN	<a href="#">SEE VIDEOS AT AMAZON</a>

204

FIG. 6

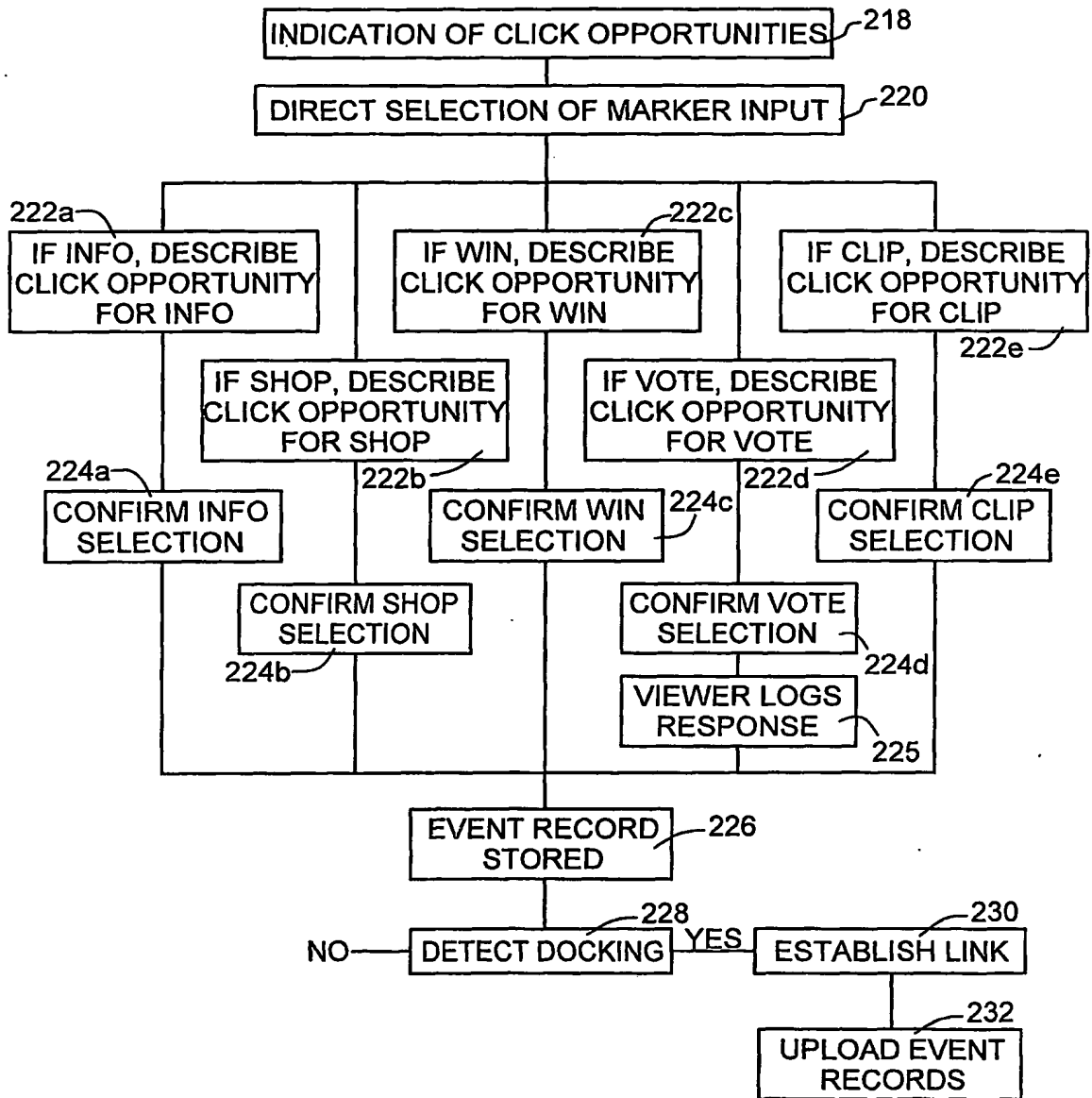
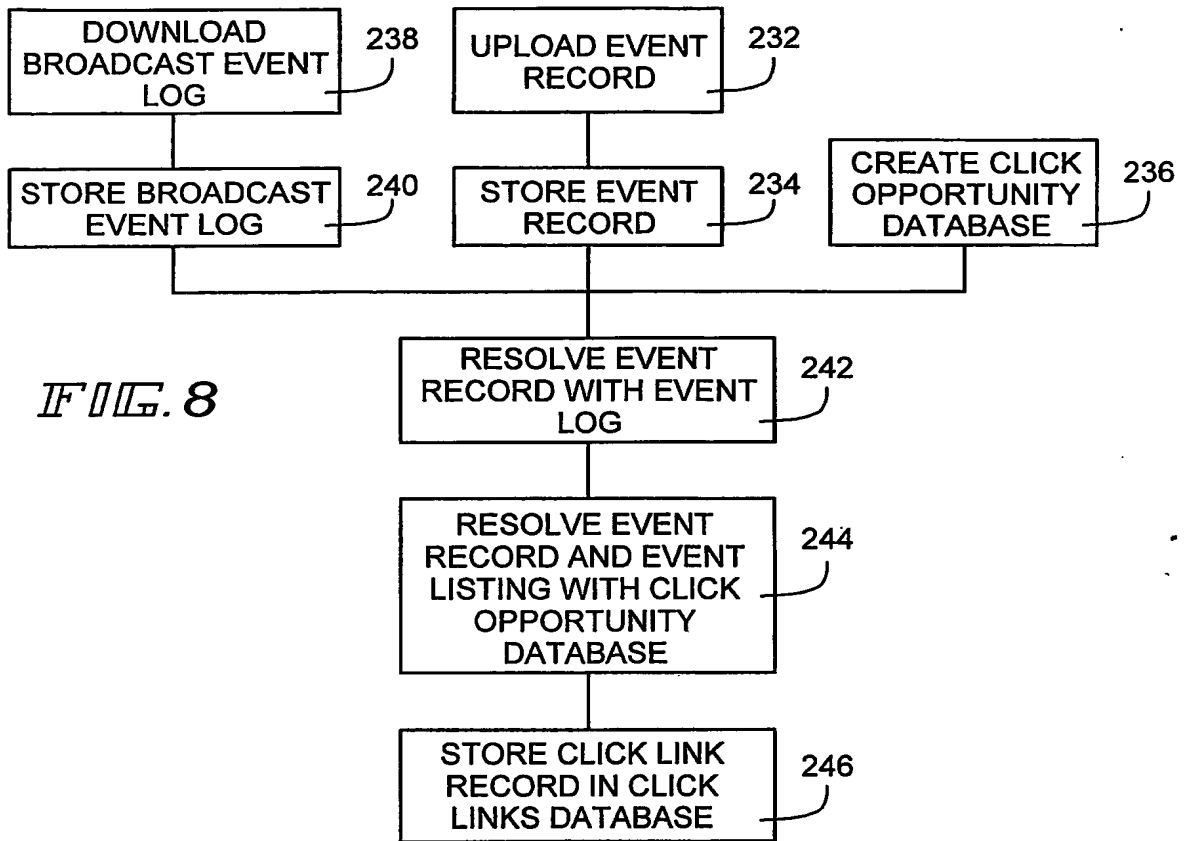
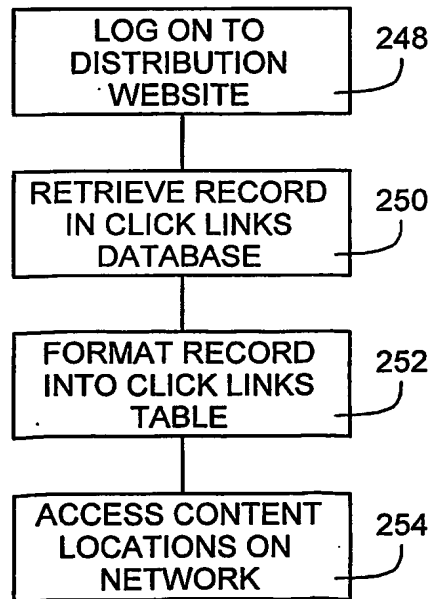


FIG. 7

*FIG. 8A*



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/00991

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04N 7/16

US CL : 348/553, 734, 907; 725/109, 110, 112, 113

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 348/553, 734, 907; 725/109, 110, 112, 113

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
None

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,907,322 A (KELLY et al.) 25 May 1999, see Figs. 1-9, and column 1, line 54 to col. 2, line 5 & col. 7, line 30 to col. 8, line 65.	1-52
Y	US 6,002,443 A (IGGULDEN) 14 December 1999, see col. 4, line 39 to col. 6, line 35.	1-52
Y	US 5,920,338 A (KATZ) 06 July 1999, see col. 2, line 40 to col. 3, line 21, and col. 12, line 10 to col. 14, line 8.	1-52
Y	US 5,065,251 A (SHUHART, Jr. et al.) 12 November 1991, see col. 2, line 40 to col. 3, line 5.	1, 12, 22, 45, 49.
Y	US 5,786,814 A (MORAN et al.) 28 July 1998, see col. 3, lines 10-62.	1, 12, 22, 45, 49.
Y	US 5,627,959 A (BROWN et al.) 06 May 1997, see col. 2, line 30 to col. 4, line 20.	1, 12, 22, 45, 49.

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

Special categories of cited documents:	
* "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"B" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"Z" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

19 April 2002 (19.04.2002)

Date of mailing of the international search report

09 MAY 2002

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks

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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US02/00991

**Continuation of B. FIELDS SEARCHED Item 3:**

EAST. Search terms: context sensitive, broadcast/broadcasting, media, marking event, web, web site, www, internet, URL, TV, television.